

Updated Aug. 24, 2015



Frequently Asked Questions About the Folsom Street Living Lab and Phase II Complete Streets Pilot Projects

The City of Boulder's Transportation Division has compiled this resource based on frequently asked questions about the Folsom Street Living Lab and Phase II of the Living Lab program. This updated FAQ uses data collected from the first three weeks of the Living Lab installation on Folsom Street and reflects comments received from the City Council, Transportation Advisory Board, and community members. City staff will continue to update this list of questions and provide responses based on community feedback throughout Phase II.

If your question is not answered below or you would like to discuss this topic with the Living Lab project managers, please contact [Marni Ratzel](#) at 303-441-4138 or [Dave "DK" Kemp](#) at 303-441-1955.

1. What is the Folsom Street Living Lab?

The Folsom Street Living Lab is pilot project that allows the city to test and evaluate whether repurposing vehicle lanes between Valmont Road and Canyon Boulevard will enhance travel safety. These temporary changes include converting one vehicle lane into two wider bicycle lanes; converting another through lane into a center turning lane; and using signs, painted pavement markings and flexible delineators to guide traffic.

Folsom Street provides an opportunity test street design techniques that are used across the country and solicit community input about what is – or is not – a good fit for Boulder.

2. Why is the city doing this?

This pilot project is one of many action items from the [Transportation Master Plan](#) (TMP), which is guided by the Boulder community's vision to create a more complete transportation system that provides a variety of travel options.

The Living Lab pilot projects are intended to create [Complete Streets](#), which was a focus area of the TMP. This approach involves fine-tuning the existing transportation system to increase access so that community members feel safe, comfortable, and confident in their travel choices, whether walking, biking, riding the bus, or driving.

3. What is the status and timing of Phase II pilot projects?

Although the Boulder City Council supported the installation of three pilot projects in June 2015, at this time, the only active pilot project is the Folsom Street Living Lab between Valmont Road and Colorado Avenue. Installation of the project was completed in late July 2015, and city staff is collecting data such as traffic volume, average speeds, travel time and collisions. Staff is adding that data to the Living Lab website, www.BoulderLivingLab.net, on a regular basis.

4. What is the status of the other two Living Labs?

The city has put the Living Labs for Iris Street and 63rd Street on hold to allow adequate time to analyze the travel data, community feedback, and field observations from the Folsom Street Living

Lab. The outcome of the Folsom Street assessment will inform potential adjustments or changes to this and other pilot project installations.

5. What data is the city collecting to evaluate the project?

Three weeks after completing the installation of the Folsom Street Living Lab, the Transportation Division continues to observe travel conditions, learn from community members' experiences, and gather travel data from along Folsom and adjacent streets. The data include vehicle volume and speed, corridor travel time (including data from peak travel times), the number and types of collisions, and bicycle traffic volume.

6. Has the city used the data to make adjustments to Folsom Street since the project started?

Yes. The city is evaluating the Folsom Street Living Lab on a weekly basis. Transportation staff is making adjustments and refinements based on the initial travel data and in response to community concerns. Staff has refined the timing of the Pearl Street traffic signal by increasing the length of the green light signals for both northbound and southbound traffic on Folsom Street.

More substantial changes could include modifications to existing medians and to the length of turn lanes, but it is too soon to draw conclusions or prescribe any major modifications to the corridor. The ongoing data collection, along with community and City Council feedback, will help to shape future changes to the corridor.

7. What has the data shown so far?

Staff's preliminary evaluation of the data collected from July 27 to Aug. 16 indicates that the:

- Average weekday bike traffic volumes at Folsom Street, north of Pine Street, have increased by 38 percent;
- Average weekday vehicle traffic volumes at Folsom Street, north of Canyon Boulevard, have decreased by 13 percent;
- Vehicle speeds have decreased by 2 mph from 39 mph to 37 mph (the posted speed limit is 30 mph);
- Average travel time for northbound vehicles between Arapahoe Avenue and Valmont Road has increased by 30 seconds (28 seconds less than predicted) and the average travel time for southbound vehicles has increased by 81 seconds (11 seconds more than predicted); and
- Most significant traffic congestion has occurred along southbound Folsom Street between Pine Street and Canyon Boulevard during the evening rush hour from approximately 4:45 to 5:45 p.m.

8. Will the city continue to collect data?

Yes. In September, the city will be collecting vehicle traffic volume data on 19th, 20th and 28th streets to address community concerns about traffic diverting from Folsom Street. This data collection schedule accounts for the traffic patterns associated with the fall school semester. Staff will post the results of the adjacent street evaluations on the website and share them with the community, Transportation Advisory Board and City Council.

Staff will continue building on the initial data from the first three weeks of the pilot project to create a foundation of the qualitative and quantitative data needed to make an informed comparison to the baseline data.

9. Where can I find the latest data?

Technical reports with preliminary data from the first three weeks of the test have been posted on the [Living Lab website](#), along with [“before” data](#) collected during the past few years. Those reports are summarized in an [infographic](#).

10. What is the data being compared to, how was it gathered, and when was it collected?

The “before” data collected in the months and years prior to the Folsom Street installation was based on standard practices for the transportation industry and is part of the ongoing monitoring of the citywide transportation system. After analyzing the available baseline data, staff determined that this “before” data was sufficient for the purposes of testing this street design on Folsom Street and then recommended to the Transportation Advisory Board and City Council that implementation proceed.

The safety data (collision history) is based on three years of data collected from 2012 through 2014. The vehicle traffic volume data is based on average daily counts collected over several concurrent weekdays. The travel time analysis (for “before” and “after” conditions) uses multiple sources of data, including rush hour drives along the corridor and 24/7 automated data collection. The bicycle traffic volumes are based on single-day counts conducted over time, as well as ongoing data from automated counters in the bike lanes from 2012 through 2015.

The city has also collected baseline data for the secondary evaluation criteria, including traffic diversion to neighborhood streets; left-turning movements from side streets; intersection levels of service; left-turn queue lengths; bicycle demographics; pedestrian crossing volumes; and transit ridership. The complete Living Lab evaluation matrix and the “before” data sets are available at www.BoulderLivingLab.net.

11. Is the city listening to the community to get their views about Living Lab?

Yes, in addition to the field observations and data collection, the city continues to receive a high volume of valuable community feedback about how the Folsom Street Living Lab is affecting people’s ability to get around Boulder.

User experience is a vital component of the Living Lab evaluation process. The city encourages input from residents, businesses, bicyclists, pedestrians and motorists on the impacts – positive, neutral or negative – that these projects are having on their ability to get around Boulder.

Community input, along with the technical transportation analyses, will be used to determine whether these types of street treatments are an effective way to help the community achieve its goals for safer streets and a more sustainable transportation system.

Staff is collecting comments from the community through sources such as emails to City Council and staff, letters to the editor in the Daily Camera, comments at public meetings and posts on social media. That community feedback is being [compiled and posted](#) on the Living Lab website.

12. Businesses along Folsom Street are concerned about the project’s economic effects. How is the city addressing their concerns?

The city is hosting listening sessions at the Boulder Chamber, 2440 Pearl St. on Thursday, Aug. 27, from noon to 1 p.m. and Thursday, Aug. 27, from 5 to 6:30 p.m.

These meetings are part of several opportunities to provide ongoing input on the Living Lab project. Project staff will continue to meet with business owners along Folsom Street, and additional one-on-one meetings can be scheduled upon request.

The city is committed to following up on specific concerns and determining potential improvements that can be made to address recurring issues.

13. Will the city meet with my neighborhood or stakeholder group?

Members of the community can contact [Marni Ratzel](#) at 303-441-4138 or [Dave “DK” Kemp](#) at 303-441-1955. Staff may be available for additional meetings, as needed.

14. What other outreach events are going on?

Through September and October, members of the city transportation staff are organizing a number of driving, walking and biking audits for community members to travel together through the Folsom Street corridor. Observations and data will be collected and discussed in groups, recorded and shared with the city as part of the project evaluation. Details about the audits can be found on www.BoulderLivingLab.net.

15. What updates about the project are coming up?

At the [Aug. 25 study session](#), staff will present council with the community feedback, field observations, travel data collected, and lessons learned to-date to inform the evaluation of whether the Folsom Street Living Lab is an effective way to help achieve the community’s transportation goals. Staff will also be seeking City Council’s feedback on potential options for next steps.

Staff’s presentation will be part of a larger update about the ongoing implementation of the Transportation Master Plan. The Transportation Department’s presentation and memo for council, which contain an in-depth discussion of Living Lab and the Complete Streets program, can be found on the Living Lab website.

16. What could the City Council do at the study session? Will there be a chance to speak?

Study sessions give City Council the chance to explore complex topics in more detail. While council may give direction to city staff during a study session, no votes are cast during study sessions. City Council study sessions are open to the public, but do not have a dedicated period for public comments.

17. What options are being presented to City Council?

Based upon the preliminary data and community comments, staff has developed the following potential options for City Council feedback, which were also shared at the Aug. 10 Transportation Advisory Board (TAB) meeting.

1. Continue the Living Lab Phase II project as planned, with monthly check-ins with TAB and council and in-depth evaluations at the one-, three-, six-, and 12-month milestones.
2. Based on initial feedback and evaluation, refine/modify the Folsom Street corridor and/or specific intersections, particularly between Pearl Street and Canyon Boulevard. Continue evaluation weekly, with more frequent updates to TAB and council, and then revisit Folsom Street in fall 2015.
3. Make more substantial modifications to the Folsom Street corridor and intersections, including the potential removal of individual segments, such as the section between Pearl Street and Canyon Boulevard.
4. Remove the Folsom Street Living Lab project.

City staff will not be making a recommendation for which option to pursue. It is asking City Council for guidance, and council members may suggest other ideas.

18. Will there be additional updates after City Council has provided its guidance?

Yes. Throughout the duration of the Living Lab Phase II pilot projects, staff will provide monthly updates to the TAB at its regular meeting. The next TAB meeting is Monday, Sept. 14, at 6 p.m. in Council Chambers, located on the second floor of the Municipal Building at 1777 Broadway.

Community members are welcome to speak during the public participation portion of the TAB meetings. City Council will receive a copy of the materials provided to the TAB, as well as meeting minutes.

19. What criteria will be used to determine the success or failure of the project?

The city is using a variety of evaluation criteria to measure the results of the Folsom Street Living Lab and determine if it helps achieve the city's transportation and sustainability goals. Before the Folsom Street Living Lab was installed, city staff collected baseline data that will be compared with the Living Lab results. An initial list of Living Lab Phase II criteria is shown below.

- Overall traffic safety record and types of collisions
- Vehicle volume and speed
- Corridor travel time
- Traffic displacement/diversion
- Average daily traffic
- Intersection level of service/capacity analysis
- Bicycle volume and demographics
- Overall facility maintenance

Additional criteria will be used following the project installations, including:

- Emergency response times;
- Right-turn treatment and turning conflicts;
- Left-turn queue lengths; and
- Transit operations and bicycle interactions.

What constitutes success or failure will be determined collectively based on community feedback and the results from the ongoing technical analyses. These results will be reviewed by the city's Transportation Advisory Board and City Council. Staff anticipates general increases in bicycle ridership and overall safety, decreases in traffic collisions, minimal travel delays for motor vehicles, and improvements to the pedestrian experience.

Success may amount to any combination of the above characteristics and will be measured holistically and in comparison with the TMP goals and measurable objectives. Technical data was gathered as part of the initial assessment of the candidate corridors considered for the Phase II lane repurposing projects. This data is presented in a Multimodal Technical Analysis Memo. This analysis, coupled with community input received during the spring 2015 public engagement process, shaped the [Project Evaluation Criteria](#). All of these documents are available online at www.BoulderLivingLab.net

20. Are there check-in points throughout the project with metric thresholds that call for undoing the Living Lab in case things don't go as expected?

The city understands that there are community concerns about possible consequences and negative impacts. As a result, staff has built in several evaluation points at which the corridor projects could be modified or discontinued, if appropriate. Following the installation of each pilot project, staff will

collect data and report results at the one month, three month, six month, and twelve month milestones, based upon the evaluation criteria listed in the following answer.

21. How do I provide input on the pilot projects?

We're interested in feedback throughout every stage of this project. Some of the ways that you can share your perspective are described below.

- *Participate in a walk, bike or drive audit* – These interactive forums offer an opportunity to experience the various conditions present for each travel option during the pilot project. Participants will travel along the pilot project corridors and make occasional stops to discuss and share their user experience with each other.
- *Attend a public meeting* – The project team is scheduling public meetings in August and September 2015 to gather initial feedback on user experience.
- *Sign up for the [GO Boulder email newsletter](#)* – Community members interested in receiving periodic email updates about the Living Lab program, including upcoming engagement opportunities throughout the pilot project duration, can sign up for this email list.
- *Share input on the city's [Inspire Boulder](#) website* - This 24-hour digital town hall enables community members to share and discuss ideas about city projects, services and programs.
- *Upload a photo and comment on [Boulder Commonplace](#)* – This geographically based community engagement map allows you to share your thoughts about getting around Boulder.

Visit www.BoulderLivingLab.net for more details, a schedule of events, and additional opportunities to provide input. Community input, along with the technical transportation analyses, will be used to determine whether these types of street treatments are an effective way to help the community achieve its goals for safer streets and a more sustainable transportation system.

22. How much did the Folsom Street Living Lab installation cost and how much is the city spending on the evaluation and data collection?

The Folsom Street Living Lab cost \$166,000 to install, and the city has spent \$15,000 on data collection and evaluation since the installation was completed. Staff estimates that an additional \$15,000 will be spent on data collection and evaluation through the end of 2015.

23. Is a budget included in the project for undoing the Living Lab?

In the event that the pilot projects need to be reverted to the original lane configurations, the funds to do so will be budgeted in the 2016 transportation budget.

24. What is the advantage of getting people to ride bikes on these roads when we have separated bike paths?

Community input received during the 2013-2014 update to the Transportation Master Plan identified community concern about conflicts between bicyclists and pedestrians on multi-use paths. A resulting action item was to provide better separation between bicyclists and pedestrians. Cyclists also have expressed a concern about sharing the roadway with motor vehicle traffic, particularly as vehicle volumes and speed limits increase. Buffered and/or protected bike lanes were identified as innovative roadway design treatments being implemented by communities throughout the U.S. and are endorsed by the National Association of City Transportation Officials (NACTO) and the Federal

Highway Administration (FHWA) as a best practice to improve safety, comfort, and access for all travel options. Boulder community members have also shared safety concerns about using multi-use paths when it is dark, in isolated areas, or during floods. Providing both on-street and off-street options is a way to serve a wide array of cyclists at different times of the day and/or seasons.

25. What benefits do these pilot projects provide for pedestrians?

Buffered and barrier-protected bike lanes improve the pedestrian experience by increasing the distance between vehicle travel lanes and the sidewalk. It is also anticipated the pilot projects will improve safety and comfort for pedestrians by slowing vehicle speeds along the pilot project corridors and shortening the distance for pedestrians crossing these streets. Drawing from research conducted by Portland, Oregon, it is estimated that up to 60 percent of cyclists are concerned about sharing the road with, and seek better separation from, motor vehicles. National best practices indicate that installing buffered and barrier-protected bike lanes improve comfort and encourage new riders, which would reduce the potential for bicyclists riding illegally on sidewalks along Folsom and the east side of 63rd Street, as well as on sidewalks that are too narrow to accommodate both cyclists and pedestrians, which includes sidewalks adjacent to neighborhoods along Iris Avenue.

26. What are protected and buffered bike lanes?

Buffered bike lanes are conventional bicycle lanes paired with a designated buffer space separating the bicycle lanes from the adjacent motor vehicle travel lanes. Protected bike lanes add vertical separations (such as flexible delineators) within the buffer space to physically separate the bicycle lanes from the adjacent travel lanes.

Buffered Bike Lane

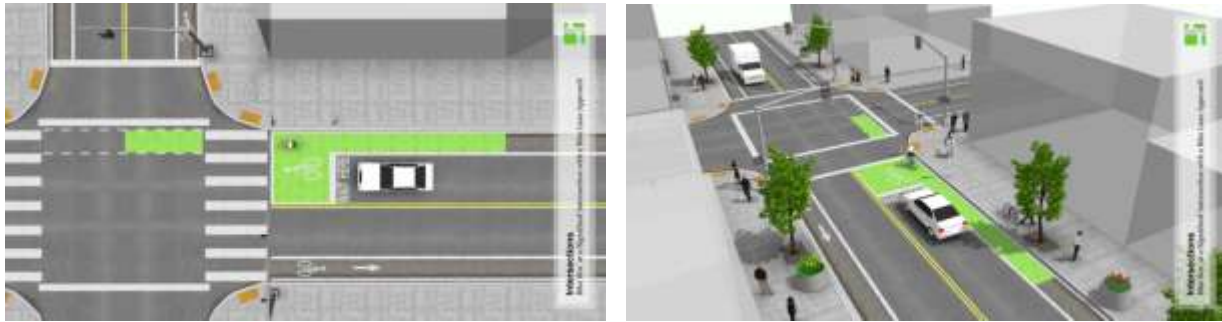


Protected Bike Lane



27. What is a bike box?

A bike box is a designated, painted area at a signalized intersection that places bicycles at the front of the waiting queue. Bike boxes increase the visibility of bicyclists and allow them to enter/clear the intersection before motor vehicles. Motor vehicles must wait behind the box and are prohibited to turn right on red. After all bicycles have left the green box and bike lane, motor vehicles may proceed through the intersection or turn right.



Source: <http://nacto.org/publication/urban-bikeway-design-guide/intersection-treatments/bike-boxes/>

28. How will bus/bike interactions addressed at bus stops?

The buffered bike lanes that pass through bus stops will be designated with striped paint markings. The buffered bike lane width also provides more space for buses to stop and queue outside the vehicular travel lane. Vertical separations in the protected bike lanes will be discontinued for an adequate distance before, through, and after the bus stops to allow buses to pull to the curb and back out into the travel lane. With the proposed lane configurations, transit operations will function similarly to how they function today. Buses must yield to bikes in the bike lanes. Bicycles and drivers may pass a stopped bus on the left.

29. What consideration has been given to the accommodation of emergency vehicles?

Transportation Division staff developed the pilot project corridor designs in coordination with the Boulder Police and Fire departments. For 63rd Street, the only bike lane delineation planned is painted markings on the roadway. Cars will still be able to pull over to the right and move into the buffered bike lanes to allow an emergency vehicle to pass them. As a result, there is no expected impact on emergency response times or access by emergency vehicles.

The Folsom Street and Iris Avenue corridors will have flexible delineators in the protected bike lanes, so vehicles will need to pull over as far to the right as possible so that emergency response vehicles can pass them using the center turn lane. The Boulder Police and Fire departments believe that the use of the center turn lane will meet their needs, but this is an issue that will continue to be evaluated. As an example, Arapahoe Road between Broadway and Folsom Street operates in this fashion today (one lane in each direction with a center turn lane that emergency vehicle can use to pass traffic). Another possibility to consider is that similar street treatments in other communities have reduced traffic collisions, resulting in fewer calls for service by emergency vehicles.

30. How would these road reconfigurations affect an emergency evacuation?

The Living Lab projects will use signing, striping, flexible delineators, and other temporary treatments. No physical or permanent barriers are planned. In the event of an emergency evacuation (or other type of emergency condition), emergency response teams can direct traffic as needed by using the full street width in a variety of ways. This also would be the case for conditions such as lane impacts from accidents and accident investigations, out of service vehicles stopped in the roadway, and closures or unusually high traffic caused by special events.

31. Would snow removal increase to clear the bike lanes and pedestrian sidewalks throughout the duration of the pilots?

Yes, snow removal will be increased to keep the buffered and protected bike lanes clear of snow. The city is currently developing a network of bicycle routes that bicyclists can rely upon during snowy conditions, and the proposed Living Lab buffered and protected bike lanes will be part of this

network. Pedestrian sidewalks are the responsibility of the adjacent property owner, and should not be expected to be cleared by the city as a part of the projects.

32. Do other cities that have adopted this approach have regular snow in winter? What have they done to accommodate bicycles in winter?

Yes, cities such as Denver, Minneapolis, Chicago, New York, and Cambridge have installed protected bike lanes. These cities make concerted efforts to clear the bike lanes of snow, ice, and debris. A People for Bikes article, [How to Stop Snow from being Bike Lane Kryptonite](#), provides case study examples of best practices. The City of Boulder is drawing from the experience of these other cities as part of the Living Lab program.

33. What level of heavy truck traffic do these roads have? Do those large vehicles require special consideration?

All of the proposed Living Lab corridor projects are designed to accommodate large vehicles, including trucks and buses. As part of the evaluation process, the potential impact of large vehicles will be monitored and if needed, design modifications can be considered to address any concerns that arise.

34. There is a multi-use path on the west side of 63rd Street. How does an on-street bike lane fit in with the pilot?

The Transportation Master Plan (TMP) identifies on-street bike lanes along 63rd Street. Currently, there is a missing link between Gunbarrel Road/Nautilus Drive and Lookout Road. The pilot project would install the on-street bike lanes within this section, which will close this gap in the on-street bike system. The on-street bike lanes are not feasible without repurposing vehicle lanes or a major capital improvement project. A multi-use path is a good bicycle facility for some users, but to enhance safety for slower-moving pedestrians on multi-use paths, on-street bike lanes are the more appropriate bicycle facility.

The pilot projects will test buffered bike lanes, evaluate the impacts to motor vehicle travel times along the corridor, and assess delays for vehicles turning left onto 63rd Street from side streets. Staff anticipates minimal, if any, travel time delays during weekday peak travel times along the corridor and equal or fewer delays for vehicles turning left onto 63rd Street.

35. How are the pilot projects being evaluated?

Qualitative and quantitative performance measures are being used to evaluate the potential for the long-term application and appropriateness of each pilot project treatment in Boulder. Technical traffic data, observational surveys, and community feedback about the user experience will help the city determine how the pilot projects are affecting safety and comfort for all transportation system users. Technical data gathered as part of the initial assessment of the candidate corridors considered for Phase II lane repurposing projects is presented in a Multimodal Technical Analysis Memo. This analysis, coupled with community input received during the spring 2015 public engagement process, shaped the Project Evaluation Criteria. All of these documents are available online at www.BoulderLivingLab.net

There will be an ongoing evaluation of the installed pilot projects. Results will be summarized and will guide policy decisions about street treatments to consider including in the city's design standards. Visit www.BoulderLivingLab.net for updates on what's been learned about each treatment currently being tested.

36. Will vehicle traffic counts be monitored on side streets? Are there baseline metrics available for comparison?

Measuring the quantity of vehicle turning movements from the Living Lab corridors onto side streets will help city staff determine whether traffic diversions are occurring. Baseline data has been collected for these turning movements.

37. If there is a reduction in the volume of vehicle traffic, would we have the metrics to indicate where that traffic volume went?

As part of the overall evaluation, staff is conducting a before/after analysis of traffic volumes on side streets, such 16th and 19th streets from Iris Avenue, as well as others. This analysis will help staff determine whether vehicle traffic is being diverted to adjacent streets.

38. These roads were deemed ideal for the pilot because they carry 15,000 to 20,000 cars per day. How does this translate to cars per hour? How would the equivalent rates during rush hours compare to status quo travel times?

The technical analyses performed on all four corridors included the peak travel hour conditions. The results indicate that additional vehicle traffic delays along these corridors during this time would be relatively small. On the Folsom Street corridor, the anticipated delay is 78 seconds; on Iris Avenue the anticipated delay is 12 seconds, and there are no additional delays anticipated along the 63rd street corridor.

39. Will potholes and other irregularities that currently affect traffic flows be remedied prior to the pilots?

Potholes and roadway irregularities along the proposed candidate corridors will be repaired and maintained prior to the new lane configurations.

40. In choosing the pilot streets, what consideration was given to bike route/path linkages at the end points of the proposed routes?

The pilot projects were selected using a variety of criteria and are intended to enhance Boulder's "Complete Streets" network. Some of the proposed corridors connect and augment the off-street, multi-use path connections, creating options for use by different types of cyclists as well as use during different seasons and/or times of the day.

41. What changes have occurred in traffic flow analyses between now and when Iris Avenue was first increased from two to four lanes?

Staff is not sure if or when Iris Avenue (in the area being discussed) changed from two lanes to the four lanes that exist today. A historical traffic count location on Iris Avenue east of 19th Street provides yearly traffic count data going back to 1983. At that time, the daily traffic count was approximately 17,600 vehicles per day. This number grew over the next few decades and peaked at approximately 25,400 vehicles per day in 2007. The volume has decreased since then and is currently estimated at approximately 23,400 vehicles per day.

The desire for a more comprehensive data collection and monitoring system before, during, and after installation is one reason that staff is now using the Living Lab approach for these corridors. Through this more systematic analysis and documentation process, the city and Boulder community can develop a more thorough understanding of the implications of installing different design treatments, and the lessons learned can be applied to future corridor projects, as appropriate.

42. Has staff considered increasing the frequency of the 208 bus for some portion of the pilot period?

Staff has not considered increasing the frequency of the 208 bus line; however, if City Council would like to explore this option, the city could do so in coordination with RTD.

Per the additional request from council, staff has received information from RTD regarding the cost to create a fare-free transit access for route 208. Based on initial information from RTD staff, the cost for this would be approximately \$80,000 per year. The city would be responsible for buying up the fares equivalent to the cost of this revenue. The decision about whether or not to support this expense has not been decided, and will be a future item considered by the Transportation Advisory Board and City Council.

43. If 28th Street were closed for some emergency, would Folsom Street function adequately as an alternate route?

No single roadway would be able to efficiently process the added traffic of 28th Street if that roadway were closed. However, Folsom Street could function as one alternate route, in addition to 19th Street, 30th Street and Foothills Parkway.

44. Table Mesa Drive was repurposed from four lanes to two lanes (plus a center turn lane and bike lanes), as was Broadway near Norwood Avenue. Does the city have before/after data on these previous rightsizing projects?

City staff has not performed before and after studies on either of these two corridors. Anecdotally, staff has not found any operational issues resulting from either lane repurposing project. These were examples of locations where there was excess capacity and removing it does not appear to have resulted in increased travel delays along the corridor. Staff does not know if these projects resulted in an increase in cycling or a decrease in crashes in the corridor.

The desire for a more comprehensive data collection and monitoring system before, during and after installation is why staff is using the Living Lab approach for these pilot projects. Through this systematic analysis and documentation process, the city and Boulder community can gain a more thorough understanding the implications of installing different design treatments, and the lessons learned can be applied to future transportation projects, as appropriate.